

I CLAIM:

1. A method of determining the presence of chronic volume dependent hypertension in a patient comprising
 - obtaining a body specimen containing a specific protein which is identical or similar to the human renal brush border membrane,
 - detecting the protein,
 - detecting the level of phosphorylation or concentration of said protein,
 - determining the level of phosphorylation or concentration relative to the range in normal patients, whereby a substantial reduction in phosphorylation or concentration of said protein from the normal range is indicative of chronic volume dependent hypertension, and
 - employing CLAMP as said protein.
2. The method of claim 1 including employing blood as said body specimens.
3. The method of claim 1 including employing urine as said body specimen.
4. The method of claim 1 including employing a blood-derived protein as said protein.
5. The method of claim 1 including effecting said hypertension determination by determining said level of phosphorylation.

6. The method of claim 1 including
effecting said hypertension determination by determining said
concentration.

7. The method of claim 4 wherein said blood-derived protein is
obtained from the human patient body specimen selected from the group consisting of
blood serum and blood plasma.

8. The method of claim 7 wherein said method is employed to
determine the presence of chronic volume expansion hypertension in the human
patient.

9. The method of claim 1 wherein the substantial reduction in
phosphorylation or concentration relative to normal patient range is indicative of
chronic volume dependent hypertension regardless of the presence or absence of
vasoconstriction.

10. The method of claim 1 including
said protein having an $M_r = 72$ kiloDaltons.

11. The method of claim 1 wherein said substantial reduction in
phosphorylation is determined to exist when said reduction in phosphorylation or
concentration is at least about 20 percent from the range in normal patients.

12. The method of claim 7 wherein the blood serum from the
human patient is employed as a source of said blood-derived protein for determining
the level of phosphorylation relative to the range in normal patients.

13. The method of claim 1 wherein said substantial reduction in
phosphorylation or concentration is determined to exist when said reduction in
phosphorylation is a reduction of about 20 to 30 percent from the range of normal
patients.

14. The method of claim 12 wherein an antibody is employed to
detect said blood-derived protein in said patient blood serum.

15. The method of claim 7 wherein the blood plasma from the human patient is employed as a source of said blood-derived protein.

16. The method of claim 1 wherein the substantial reduction in phosphorylation or concentration relative to normal patient range is indicative of chronic volume dependent hypertension regardless of the presence or absence of cyclic AMP.

17. The method of claim 7 wherein the blood-derived protein employed is a protein obtained from a cellular element of the blood obtained from the human patient.

18. The method of claim 7 wherein the substantial reduction in phosphorylation or concentration relative to normal patient range is indicative of chronic volume dependent hypertension regardless of the presence or absence of other types of hypertension in said patient.

19. Apparatus for determining the presence of chronic volume dependent hypertension in a patient comprising

means for receiving a human patient body specimen containing a protein, and

means for determining the level of phosphorylation or concentration of said protein relative to the range in normal patients, wherein a substantial reduction in phosphorylation or concentration of said blood-derived protein from the normal range is indicative of chronic volume dependent hypertension.

20. The apparatus of claim 19 including

said means for receiving a human patient body specimen structured to employ blood as said body specimen.

21. The method of claim 19 including

said means for receiving a human patient body specimen being structured to employ urine as said body specimen.

22. The apparatus of claim 19 including

said means for determining being structured to effect said hypertension determination by determining said level of phosphorylation.

23. The apparatus of claim 19 including
said means for determining being structured to effect said
determination by determining said concentration.
24. The apparatus of claim 20 including
said means for determining having means for effecting said
determination from blood serum.
25. The apparatus of claim 19 including
said means for determining including antibody means.
26. The apparatus of claim 19 including
said means for determining if said reduced phosphorylation or
concentration is at least about 20 percent below the range of normal patients.
27. The apparatus of claim 19 including
said means for determining having means for determining if said
reduced phosphorylation is at least about 20 to 30 percent below the range of normal
patients.
28. The apparatus of claim 19 including
said means for determining having means for making said
determination independent of the presence or absence of cyclic AMP.
29. The apparatus of claim 19 including
said means for determining including means for employing
CLAMP as said blood-derived protein.
30. A method for determining the presence of chronic volume
dependent hypertension in a patient and therapeutically treating the same comprising
determining if there has been a substantial reduction in
phosphorylation or concentration of a specific protein,
employing CLAMP as said protein and if such a substantial
reduction exists, treating said patient therapeutically to reduce said hypertension.

31. The method of claim 30 including
said substantial reduction of phosphorylation or concentration is
determined to exist when said reduction of phosphorylation or concentration of at least
20 percent from the range of normal patients.
32. The method of claim 31 including
employing as said therapeutic treating at least one of the group
consisting of diuretics, antihypertensive drugs, diet control and exercise.
33. The method of claim 30 including
employing as said protein a protein having an $M_r=72$
kiloDaltons.
34. The method of claim 30 including
employing a blood-derived protein as said protein.
35. The method of claim 33 including
employing as said blood-derived protein a protein obtained from
a cellular element of the blood.
36. The method of claim 30 including
employing urine as the source of said protein.
37. The method of claim 35 including
employing a lymphocyte as said cellular element.